

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002021**Date Inspected:** 26-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 89 Meter Mock-Up/77 Meter Mock-Up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Roscoe Dixon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following:

89 Meter Mockup-skin plate D:

QA Inspector Dixon randomly observed two ZPMC qualified welders performing tack welding along both sides of two different longitudinal stiffeners.

his QA Inspector first observed stiffener mp539 being welded by qualified welder Li Zhen Xu ID # 066179 at the junction of Sub-Assembly MUSB-MA22 A/B-7 and qualified welder Ma Zho Yong ID # 066109 was welding at MUSB-MA22 A/B-8 (Skin Plate D).

The second longitudinal stiffener mp542-1 was observed being welded at the junction of Sub-Assembly MUSA-MA22 A/B-11 by Mr. Li Zhen Xu and A/B-12 was bein welded by Mr. Ma Zho Yong.

he welding was performed in the 2F (Horizontal) position utilizing shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal brand TL-508, and class E7018 manual. This QA Inspector Dixon observed the ZPMC Certified Welding Inspector (CWI) Xu Le Feng verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification WPS-B-T-2212-TC-U5b.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

This QA Inspector Dixon noticed that ZPMC personnel Zhao Mao was checking the preheating temperature with a Temple stick heat crayon within the area which was being heated by the ZPMC personnel with the use of rosebud torch flames at the junction of Skin Face D and the stiffener which was being welded.

This QA Inspector also performed a random check of the area with a Temple stick, which melted when checked at the area, which was heated with the flame, but when checked at the underside of the Skin plate in the through thickness direction this QA Inspector discovered that the heat was not sufficient to melt the 110 degree Celsius Temple stick.

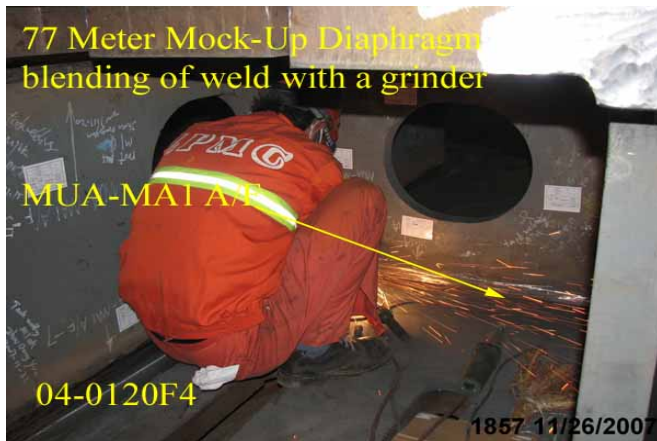
This QA Inspector notified the Burea Vertas CWI Mr. Hou Jing Yao of the discrepancy and he notified the ZPMC CWI Mr. Xu Le Feng, and after a discussing this mater with ZPMC personnel Mr Eric Xu who was also in the area, Mr. Xiu informed this QA Inspector that in the future when using this practice to preheat parts to be welded ZPMC would heat all sides to insure preheating in all directions.

77 Meter Diaphragm Mock-up:

This QA Inspector observed ZPMC personnel using a mechanical grinder to blend the Partial Joint Penetration (PJP)tack welds of the diaphragm weld joint MA38A/B-14 and MA38A/B-3 to a smooth transition.89 Meter Mockup-skin plate E:

This QA Inspector observed ZPMC personnel grinding the Partial Joint Penetration (PJP) longitudinal stiffener weld at joint MUA-MA1 A/F to a smooth transition.

See photograph below to provide additional detail.



Summary of Conversations:

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Inspected By: Dixon,Roscoe

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer